

The Australian Entomology Society 54th Annual General Meeting & Scientific Conference

Albany 12th-16th November 2023

Not particularly loving biology when I was young and now finding myself an amateur entomologist, this Conference happening so close to home was a not to be missed event. 120 Presentations on offer over 3 days and The Friends afterwards welcoming conference attenders at Twin Creeks was a once in a lifetime opportunity. I am very glad I was part of it.

During her Welcome to Country, Vernice Gillies didn't hold back on her disappointment about the outcome of the Voice to Parliament referendum: "this is not my land, this is not your land, this is our land" Vernice stated while looking at the audience. During his opening speech Steve Hopper talked about the importance of the South West as a biodiversity hotspot, the importance of refugia islands and the communication with Aboriginal elders, especially women.

Of the 120 presentations, divided over 2 locations, many presenting scientists were talking about revising and redefining insect families, genera and subgenera to species level. Endless images of phylogenetic trees were passing on the big screen, there were many explanations of differences between specimens, discussions about taxons, observations about insect behaviour and the advantages of using eDNA and meta barcoding. (I know...a lot of jargon was used.) This was taxonomist and entomologist heaven. Sometimes I thought: How important is it to determine the difference between two almost identical specimens, what's the point? Well, the point is we want to know exactly how the environment around us works, and therefore we need to know exactly what every living creature's meaning and purpose in it is.

Quite a few presentations had bees as their subject, for instance:

- The difference between male and female, nectar and pollen collecting bees.
- Identifying diseases in bee colonies with the assistance of beekeepers.
- The loss of genetic diversity of a single colony of invading bees through inbreeding, before dispersing into their new territory.
- Heavy reliance on introduced honey bees for pollination of introduced fruit trees.

With today's globalisation, many talks had invasive and predator species as subject; how to identify and manage and how to eradicate. Shot hole borers, invasive ants, wasps and snails are some of the species that are intensively researched by DPIRD. Safeguarding our borders for environmental conservation and managing native biosecurity is also very high on the list.

In 2017 the free app *MyPestGuide Reporter* was introduced as a tool for the public to report pest attacks, a way to detect pests and sometimes to identify a new endemic

species. These observations are essential for identifying harmful pests and therefore for policy-making.

Studies were done on the importance of urban remnant vegetation sites, how to improve biodiversity in the city and suburbs and the effect of translocating native insects into this vegetation. Also studied was the importance of revegetating areas not only with flora but also bringing in healthy lively topsoil, creating a more diverse and therefore sustainable environment.

The importance of observations by the community and citizen science were often mentioned, platforms like *Atlas of Living Australia*, *iNaturalist* and *MyPestGuide Reporter* are well established and essential tools for today's scientific research and a way to make people aware of their environment, encouraging them to get involved, starting with kids and school- as well as community projects.

Bush Blitz is Australia's largest species discovery program a partnership between many departments and organisations. Most of their expeditions visit out of the way areas where anything interesting will be collected, flora as well as fauna. Many researchers mentioned that there is so much work to be done on "shelved invertebrates" stored at museums and universities, they question "why collect more?"

What did I learn?

During so many discussions and presentations that were part of this conference I got the feeling that we all are doing a great job at Twin Creeks and the Porongurup National Park. Protecting the land, the flora and the fauna and trying to discover what is growing and living at this unique place in this world.

Many times I got the question while speaking with other attendees: "What are you doing with what you collect during surveys?" I got many surprised reactions when I said "we identify and release" and I still think we should keep doing that although often scientists say: "When you have one, you have more", implying that we should keep specimens.

For me personally phylogenetic trees are not my thing, I am more of a hands-on field guy but I have to say it is extremely motivating to see the *Beutelius* high up the tree that Loxley showed during her presentation at TC.
That tastes like more!

In closing: Thank you Porongurup Friends for giving me the opportunity to be part of this 'Critter Festival'. It has been a very inspirational experience.

Thursday November 16, after the AES Conference visit to TCCR

Early Thursday evening, Andreas Zwick (moths) and his team showed me what is involved in setting up a moth tent. They had chosen a spot in the sandy heath bush near the rough track going South up the hill. They set up 3 more trapping tents on different sites and at about 9.30 it was time for the first checking round.

There were a LOT of moths. Andreas was very happy with what they were finding in at least two locations, and I assisted them in checking and catching. Two of the 4 locations were too windy so not good for moth catching.

All 4 people in the team were explaining everything they were doing to me and after having checked all 4 trapping sites they went to bed and I went home (00.15h)

Checking moth traps is night work, so they got up at 3am again for the last check before sunrise and I was back at 9.30am when the guys were sorting the catch from that night. I helped a bit and again Andreas explained everything they were doing. I never listened to so many Latin names in such short time. They had found at least 2 new species! I left at 10.30am (other obligations sadly enough) and they would have been there till mid afternoon to finish sorting and pinning. The most interesting moths were caught just south of trapline 5 (the grid), a bit higher up. This is also the area where we found the Beutelius, so maybe this area is special and I think we should keep that secret. I'd be excited to go in with our team and do some flora and fauna surveys there although the bush is pretty dense.

During Andreas' survey they also collected some beetles and bag moths. Living (that is his name, he studies pie dish beetles) sadly enough found only one specimen.

Their plan was to visit the west end of the Stirling Ranges on Friday night and the Mount Frankland area Saturday night and fly home on Monday.

Andreas and the team were very appreciative of the welcome, the accommodation and the space of the Silver Shed where they could do their sorting, gassing (to make the moths go to sleep and die) and pinning. Only praising words. I again asked him to keep us informed about their findings.

Since Andreas and his team left, I have placed our bug tent in the same area (sandy heath) as where they had gathered the most varied collection of moths.

First image is a 'moth tent' in working order during collection.

Second image is an overview of what they found and pinned so far in the wider area of Kalgoorlie Esperance and Ravensthorpe

Third image is Andreas sorting.

Fourth image shows the plastic bag, the catch of one of the 4 locations. Afterwards we set a lot of the moths free but he also kept many.



